

Proposed Project

Upper Little Patuxent Watershed

Project Number: BF28
Subwatershed: Red Hill Branch

Project Type: Reforestation
Project Size: 4.53 acres

Project Location: Behind homes of cul-de-sacs Salterforth Place and Ramsgill Court and adjacent to Brampton Parkway.

Project Description: This project would be combined with projects RHB_03a and RHB_03b and entails reforesting the areas adjacent to the ponds at the end of Ramsgill Court and Salterforth Place. Most of the area outlined in the map is either part of the pond or has scattered trees and shrubs and would not require full reforestation, thus lowering the cost shown below. However, there is a large open field adjacent to Brampton Parkway that could be mostly reforested leaving only enough area to access the ponds for maintenance. Field verification of the site indicated invasive species in the area that should be sprayed or removed prior to planting.



Use of volunteer assistance for site preparation, planting and necessary maintenance and monitoring of the site could help reduce overall project cost.

Project Benefits:

Environmental	Additional trees and shrubs will filter overland flow and reduce runoff. Additional forested areas also provide air quality benefits and provide habitat for wildlife.
Water Quality	Additional trees will trap runoff and pollutants such as fertilizers from the adjacent property and roads.

Project Constraints:

Environmental	No environmental/permitting constraints are present.
Property Ownership	This property is on County owned open space (Brampton Hills natural resource open space).
Facility Access	Access to this site is obtained from either Salterforth Place or Ramsgill Court.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development. An access route should remain unforested for maintenance of the two stormwater ponds.

Proposed Project

Upper Little Patuxent Watershed

Project Number: BF28
Subwatershed: Red Hill Branch

Project Type: Reforestation
Project Size: 4.53 acres

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	4.53	AC	\$3,750.00	\$16,988	\$16,988
Plant Material (shrubs)	4.53	AC	\$2,725.00	\$12,344	\$12,344
Mulch, Tree Shelter	3,083	PLANTS	\$6.00	\$18,499	\$18,499
Cost to Plant	3,083	PLANTS	\$6.00	\$0	\$18,499
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$47,831	\$66,331
Base Construction Cost				\$47,831	\$66,331
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$47,831	\$66,331
Contingency (30%)				\$14,349	\$19,899
Construction Subtotal				\$62,180	\$86,230
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$62,180	\$86,230
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$2,392	\$3,317
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$10,354	\$14,359
Life Cycle Cost				\$72,600	\$100,600

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Planting density is planned at 1 tree or shrub planted at 8 foot intervals for a total of 681 plants per acre.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.